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## ORIGINAL COMMUNICATIONS.

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*Remarks on the uncertain effects and the abuse of Iodine and its salts.* By REYNELL COATES, M. D.—Under the Foreign head, in the third number of this journal, p. 48, is found an extract from the report of a discussion in the London University College Medical Society, during which evidence was given of seriously threatening effects resulting both from large and small doses of the iodide of potassium. These effects appear to render doubtful, at least, the propriety of resorting, in the first instance, and in private practice, to the full doses recently employed in the Pennsylvania Hospital, after the example of M. Ricord, (See Clinical Reports, pages 10 and 23, of this volume.) The editorial comment appended to the extract calls for further information on this subject, and the following observations,—being the substance of a note from our colleague, Dr. Biddle, may be added to the evidence of the occasional danger resulting from quantities not very unusually prescribed here and elsewhere.

Influenced in part by the Clinical Reports already referred to, Dr. Biddle very recently exhibited five grains of this iodide, four times a day, in the case of a female patient, thirty-five years of age. After thirty-five grains had been thus taken, Dr. B. was suddenly called, and found the patient “suffering from intense cephalalgia, considerable nervous disturbance, nausea, and remarkable tumefaction of the whole face.” These symptoms, of a poisonous action, induced him to relinquish the use of the medicine immediately, although it had been employed in quantities much smaller than those ultimately used in the cases narrated in the Clinical Reports, and those now taken, as I am informed, by many patients in the Pennsylvania Hospital, without the production of such symptoms.

The following note, by Jas. C. L. Carson, M. D., (quoted from the N. Y. Med. Gaz., p. 333,) shows the similar influence of a much smaller dose:

“I ordered a gentleman three grains of iodide of potassium in a draught of peppermint water, three times a day. When he had taken the medicine three times, he felt poorly; and in the course of an hour after the fourth dose, he was attacked with a violent shivering fit, followed by intense headach, heat of skin, thirst, quick and very full pulse, and vomiting and purging at the same time. These symptoms were succeeded by great prostration of strength. Notwithstanding the administration of opiates and demulcents, the purging lasted for several days.

“The effects of the medicine were so violent that I have little doubt, if he had taken another dose, his life would have been forfeited. This is the only instance which I have seen of the iodide of potassium producing unpleasant effects in doses under ten grains.”

It will be remembered that, in the discussion in the College Medical Society, Mr. Erichsen found the article sometimes dangerous in five grain doses, frequently repeated;—that Mr. Laskester *always* observed severe effects from *large doses*!—that Mr. Bucknill was convinced by experience that the ill consequences did not depend on the quantity given, having often witnessed them when small doses were employed;—and that Mr. Hardwicke felt assured that the varieties of effect produced did not depend upon any peculiar idiosyncrasy, but upon something accidental in the condition of the patient at the moment of exhibition.

From all this evidence, it appears very clear that iodide of potassium is not injurious, *per se*, even in large doses, when properly exhibited. The degree of dilution is one of the elements to be considered in calculating its effects; for all the preparations of iodine, like iodine itself, and its kindred agents, chlorine and bromine, are exceedingly irritating when concentrated: but the remedial influence of iodine is not materially diminished by extensive dilution, while its irritating qualities are very essentially lessened by this means. Is it not equally plain that the occasional injury resulting alike from small and large doses is due to some change in the character of the remedial agent after its admission into the stomach? None of the adulterations usually resulting from the different modes in which the iodide of potassium is prepared, are of such a nature as to explain the evil influences observed, especially when the quantity administered is small. But the muriatic, the acetic, and the lactic acids—acids which are present in the stomach in various amounts—are all capable of decomposing this salt; and the immediate result of the decomposition is the elimination of the hydriodic acid. It is not probable that hydriodic acid, in moderate quantity and much diluted, can exert any dangerous effects; but whenever oxygen is present, the iodine is readily separated.

The symptoms described as attendant upon the accidental occurrence of undue action from the use of iodide of potassium are similar to those produced by free iodine; and it appears, therefore, more than probable that the presence of an unusual amount of acid in the stomach at the time of exhibition, may explain the variety of results above described, which renders somewhat uncertain and treacherous a remedy of the highest value. If this view be correct, the danger and difficulty would be removed in great degree by the previous neutralization of the acids of the stomach when considerable doses of the iodide are about to be employed. The subject is worthy the attention of some one who combines sufficient chemical knowledge with enlarged opportunities of clinical observation.

During the debate already quoted, (see London Lancet, Oct. 16, 1841, p. 96,) Mr. Hardwicke is represented as expressing doubts whether iodine has any action on the absorbents; and Mr. Erichsen referred to



a case of orchitis seen by him in Paris, in which wasting of the testicle was produced by its use. The position of the former gentleman, if correctly reported, is startling; and, while we hold it utterly untenable, it is not without surprise that we see a single case of diminution of the testicle from the action of iodine or its preparations, seemingly quoted as remarkable. Can it be that this effect is so rarely witnessed in England, when, almost from the first introduction of the agent, it has been deemed necessary to caution the practitioner against the danger of such results when the plan of treatment is pushed to an immoderate extent?

We doubt whether the danger of the permanent destruction of an organ wasted by the use of such remedies, is so great as is generally supposed, even in extreme cases. A morbid deposit may be finally removed by such means; but, when the natural structure of a gland is absorbed,—the cellular nidus still remaining,—there is at least a hope of its re-construction. A few years ago we employed preparations of iodine, both internally and externally, to an unusual extent, and with great perseverance, in the case of a young lady affected with a large recent goitre, rapidly increasing. The internal doses, at first small, were gradually increased, and, after a few weeks, the tumour began to yield very obviously; but the *mammæ* were diminished, seemingly, as fast as the goitre. Fearful of the destruction of the glands, the quantity exhibited internally was lessened considerably, while the local application was continued. Both the tumour and the *mammæ* then continued nearly stationary for some time, until the internal doses were again increased. The treatment was continued until the goitre was reduced very much, but the *mammæ* threatened to disappear entirely. The patient was in the first blush of womanhood, and had been rather remarkably developed. Fearing not only for the *mammæ*, but the ovaries, we felt compelled to state to the father the dangers that might ensue were the remedies continued, but expressed, at the same time, our conviction that the disease would ultimately yield, if he was willing to subject his daughter to the probable physiological results of the course of treatment. After some days of doubt and consultation, it was resolved that the removal of the deformity should be attempted at all hazards; and the remedies were pushed as far and as steadily as the condition of the stomach and skin and the frequent constitutional irritation would permit with any safety—farther, indeed, than strict prudence would warrant. At length the breasts became flatter than those of a child; no glandular structure could be felt in them. The tumour continued to diminish, but less rapidly. At last it disappeared entirely. The patient was much emaciated, and we feared that her health might be permanently injured from the irritation and febrile and nervous symptoms constantly recurring during the entire spring and summer. On the cessation of the treatment, she rallied very soon, except that she continued subject to occasional nausea and vertigo. When last seen, about a year after the commencement of the treatment, her health was completely re-established, her *mammæ* were again fully developed, and she had completely succeeded in escaping

a deformity apparently more dreaded than death, both by herself and her parents.

Residing, at that time, in a region in which goitre is not uncommon, we employed a similar though less violent course of treatment in several cases; and, though only completely successful in one other instance, the action of the remedies on the tumour and the mammæ was always more or less conspicuous.

The recent recommendation of iodine in affections of the mucous surfaces, has led to a most dangerous popular custom of employing it by the way of inhalation in affections of the throat without the advice of a physician. The article is purchased in large quantities of our apothecaries, and employed, without the slightest discretion, by persons utterly ignorant of its dangerous character; and, unless the profession should publicly discountenance this custom, there is reason to fear that we may see re-enacted follies similar to those which, on the introduction of the inhalation of etherial vapour, (twelve or fourteen years ago,) consigned a number of persons, some to the grave, some to the mad-house, and some to permanent idiocy.

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*Case of Occlusion of the Vagina, nearly complete, with Pregnancy and Labour.* By N. T. GREEN, M. D.

To the Editors of the Medical Examiner.

GENTLEMEN,—Dr. Marsh's case of Atresia Vaginæ, published in the first number of your new series, has induced me to furnish you with one, which occurred in my practice during the past summer, very similar to it, except that the woman had previously borne children and was, at the time the case presented itself, pregnant and in labour.

CASE.—On the 10th of August last, (1841,) I was requested to visit Martha, a negro woman about forty years of age, belonging to Mr. Price, whom I found sitting up, and complaining of nothing except a discharge of water from the vagina, which she said had come on suddenly a few hours before. She was pregnant, and believed herself to be in the seventh or eighth month. The discharge of water was not profuse, and there was no uterine pain. Her bowels were confined. She was directed to go to bed and open her bowels with a dose of castor oil. I called in the evening and found her quite easy. The oil had operated moderately. There was still a dribbling of water from the vagina, not tinged with blood, and there was no pain. A dose of black drop was directed at night, and perfect quietude enjoined. This was done with the hope that she might still go many days longer, as I had known a case to go on a fortnight after the rupture of the membranes.

When I called next morning, contrary to my orders, she was again up, but felt no pain, and expressed herself as comfortable in all respects, except the discharge, which kept her wet. In the afternoon, however, I was sent for, and was told, by the old woman who was nursing her, that she was taken with pains shortly after my visit in



the morning, which had been gradually increasing, and that, for some hours, there had been a slight discharge of blood from the vagina at each pain. On making an examination per vaginam, my finger came in contact with a globular body filling the upper part of the pelvis, having a slight depression in its centre—apparently the uterus with its mouth not sufficiently dilated to admit the end of my finger. By pressing firmly against the sides of this body, (which I frankly admit I then supposed to be the uterus,) I could feel the child higher up, and the sensation communicated to the finger was distinctly that of a spongy mass intervening between it and the head of the child. It instantly struck me that this was a case of attachment of the placenta over the os uteri, and hence the hæmorrhage; but a little reflection convinced me that such was not the fact;—for, in that case, there could have been no discharge of water until there was some detachment of the placenta; and, whenever this occurred, the waters must have become tinged with blood, which was not at all the case during the first day of their discharge. The pains, too, were apparently strong and forcing, and had been for some time, yet they had produced no effect in dilating what I then conceived to be the os uteri.

Unable to account satisfactorily for the appearances which presented themselves, and not seeing my course clearly, I determined to investigate the state of the parts thoroughly. With this view I placed the point of my finger in the depression supposed to be the os uteri, and, by pressing firmly, and rotating it on its point, I gradually, but not without some difficulty and force, succeeded in passing it through to about the first joint, when its tip came in contact with the child's head, and it was now manifest that the finger had passed through a membranous septum partitioning off the upper end of the vagina, with a very small opening in the centre, the edges of which still constricted the finger like a cord tied tightly round it. I could now readily ascertain the situation of the head—which presented properly—and of the os uteri—which was well dilated and soft. The vagina, too, above the septum, was capacious, and filled with coagulated blood, produced by its not escaping through the very small opening in the septum as fast as it was discharged from the uterus. This it was that produced the feel of a spongy mass intervening between the finger and head of the child at the first examination. With the finger which had been passed through it and the fore-finger of the other hand introduced into the vagina, I examined this septum minutely, and ascertained that it was a smooth, soft membrane, in thickness not more than two or three lines, equal throughout, in shape circular, and attached to the vagina transversely by its whole circumference. It was placed across the vagina rather more than an inch below the os uteri. After a careful examination I could detect no cicatrix or induration in the vagina, but every portion felt soft and dilatable.

The pains had now become brisk and forcible, and I determined to leave the septum untouched, in order that I might observe the manner in which the unaided efforts of nature would overcome the obstruction; knowing that I could at any moment divide it, should

it present any serious impediment to the passage of the head. The head advanced rapidly, bringing the septum down before it almost to the os externum. When it began to press on the perineum, the membrane was drawn tightly over it, and the opening in its centre had dilated to the size of a dollar. In turning under the arch of the pubis, the opening dilated rapidly; but did not tear, so far as I could observe.

Another pain expelled the child, and the placenta followed in a few minutes. The child, which was small and apparently about the seventh month, was born asphyxiated; but, by great exertion, was revived, and afterwards grew and thrived well. The mother recovered rapidly, without any accident. Since her recovery I have had no opportunity of making an examination per vaginam, but shall do so if one offer.

This woman had previously borne several children, but none for the last ten years. In her two last labours before this, both of which were at full term, I attended her. They were both lingering and laborious, in consequence of disproportion between the child's head and the pelvis, which, in this woman, (who is herself of small stature,) is under the ordinary size. There was then no such formation as I have described existing in the vagina; but it is probable that there might have been some inflammation and sloughing, consequent upon the last of these labours, (of which, however, I was not apprised,) which, in healing, may have given origin to this singular production. I am the more induced to adopt this solution of the difficulty in accounting for it, from the long immunity from pregnancy which this woman enjoyed; for, unless we admit that conception may take place from absorption of semen in the vagina, this septum must have, almost completely, closed the door to that process.

*Danville, (Va.) Jan., 1842.*

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### BIBLIOGRAPHICAL NOTICES.

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*The Principles and Practice of Obstetric Medicine and Surgery, in reference to the Process of Parturition. Illustrated by one hundred and forty-two figures.* By FRANCIS H. RAMSBOTHAM, M. D., &c. &c. First American Edition, Revised. Philadelphia. Lea & Blanchard. 1842. pp. 458. Royal Octavo.

This work is one of the most useful lately issued from the American press. It is a reprint of Rambotham's work, with his excellent illustrations. These comprise a series of fifty-two plates, containing one hundred and forty-two figures. They are beautiful lithographs, executed in admirable style, under the careful supervision of the publishers, and are amply sufficient for all purposes of the obstetric stu-



dent and practitioner. The text and description of the plates is written in a clear and simple style, and is extended enough for the purpose.

In common with many members of the profession, we have long regretted the absence of a work of this kind. The mechanism of labour is simplicity itself, when illustrated with plates and models; but one of the most unintelligible departments of the art of medicine, when taught only in words, or studied from works of midwifery. There are two distinct divisions of the subject; that connected with labour as a physiological and mechanical action, and the treatment of the disorders incident to it. The object of the present work is to explain the process of parturition, which it has done more satisfactorily than any other of equally moderate dimensions and cost.

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### CLINICAL REPORTS.

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PENNSYLVANIA HOSPITAL—*Surgical Wards*—Service of Dr. E. PEACE.

*Fractured Thigh.*—J. S., ætat. 11, was admitted Nov. 10th, with an oblique fracture of the middle third of the right thigh-bone, produced by a blow upon the part. When first seen, about an hour and a half after the accident, the limb was shortened at least two inches. It was dressed, as usual, with Physick's modification of Desault's apparatus. The boy's skin was so delicate and sensitive as in a few hours to require the relaxation of the extending and counter-extending bands, although they had been applied with great care. On the third or fourth day, in consequence of the right groin having suffered some abrasion from the perineal band of Physick's splints, Hartshorne's splints were substituted, and the counter-extension effected by means of the cushioned inner splint of the latter apparatus upon the perineum of the left side. It was found to be impossible, however, to maintain the extension even in this manner for any length of time, on account of the pain caused by the pressure upon the heel, ankles, and instep of the gaiter to which the extending bands were attached.

These latter were loosened, therefore, and the gaiter used only to preserve the upright position of the foot. The thigh was then subjected to firm and uniform compression by means of a pillow and short splints within the long ones already employed, in addition to a roller applied in the ordinary manner to the whole extremity. Union, which appeared to be well advanced on the twentieth day, had become quite firm at the end of twenty-five days. The splints were removed at the expiration of the fourth week, the roller being continued. After resting one week longer, the patient was allowed to move about on crutches, without using the limb. The crutches were gradually laid aside in the

course of the succeeding two weeks. The boy was discharged January 12th, cured, without perceptible deformity or lameness, not more than a quarter of an inch in shortening having been detected by the most careful and repeated measuring.

2. *Concussion of the Brain and Fractured Clavicle.*—M. K., ætat. 19, admitted with severe concussion of the brain and oblique fracture of the middle third of the right clavicle, the effects of a fall of about six feet upon a stone pavement. When brought in, the patient appeared to be in a deep and quiet sleep, from which it was impossible entirely to rouse him.

Considerable prostration was also observed. Reaction having been fully established under the influence of artificial heat and sinapisms to the extremities, blood was freely taken from the head by means of cups, and a purgative enema was administered. The symptoms of concussion continued gradually disappearing for five days; during which time cathartics and diaphoretics were given, the cups were re-applied, and a rigidly low diet and perfect rest enjoined. No inflammation of the brain supervened. Owing to the cerebral complication, it was very difficult properly to reduce and adjust the fragments of the broken clavicle—especially as they were very much displaced—until the third day; when the fracture was securely dressed with Fox's clavicle apparatus. Consolidation was complete, without visible deformity, on the twenty-first day. The patient was discharged January 14th, cured. This is the fifth case of fractured clavicle treated in these wards during the last five months.

The four cases preceding this were all treated, according to the custom of the house, with Fox's apparatus. In the first of them, the patient being twenty-four years of age, union took place in about twenty days, a slight prominence remaining at the seat of fracture. In the second, the case of an individual over fifty years, the bones did not unite before the twenty-eighth or thirtieth day, but there was no deformity whatever. The two other cases left the hospital while under treatment, and therefore afforded no results.

The case of M. K. is also the second instance of simple fracture complicated with concussion of the brain treated in these wards during the last five months.

The first, although in a subject only eleven years old, was of a far more serious nature than the present, inasmuch as the concussion of the brain was severe, and was succeeded by a violent and nearly fatal inflammation of that organ, while there were two fractures, one of the lower jaw, and one of the left humerus. Although the violent delirium and constant restlessness of the boy seriously interfered with the treatment of the fractures, putting utterly out of the question, in fact, any thing like rest of the fragments, and especially of those of the lower jaw, upon which no dressing could be long retained. Yet the latter became firm in sixteen days, without deformity, and the humerus united within thirty days also without displacement. In this case, besides the constant delirium, marked by extreme restlessness and a disposition to tear off every bandage, there was, during several days, alarm-



ing prostration of the vital powers. It is a matter of regret to the reporter that this case was treated during his temporary absence from the house, and that he is, therefore, unable to furnish more than the above meagre details.

E. H.

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## THE MEDICAL EXAMINER.

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PHILADELPHIA, JANUARY 29, 1842.

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*Dr. Paine in reply to Dr. Carpenter.*—Dr. Paine, of New York, has published in the Boston Medical and Surgical Journal a rejoinder to the refutation of a charge of plagiarism, brought against Dr. Carpenter, of England, which we inserted in the fifty-second number of our last volume, (p. 829.) Dr. Paine's rejoinder occupies upwards of six pages of the Boston Journal; an amount of space that precludes our complying with his request to copy it. The gist of it is, that Dr. Paine refuses to admit Dr. Carpenter's disclaimer, backed as it is by the editor of the British and Foreign Review, on the ground, among other reasons, that the name of the actual plagiarist is withheld. We have no wish to enter into the merits of this discussion between an author and his reviewer, but we must say that we think Dr. Carpenter has satisfactorily freed himself from the stigma of literary plagiarism. We are surprised that Dr. Paine should not only not withdraw his charge, but should continue to harp upon such flimsy circumstantial evidence as mere coincidence of thought and style between Dr. Carpenter and the plagiarist, after the direct rebutting testimony which has been adduced. Irritated as Dr. Paine may feel at what he deems the injustice and misrepresentations of the British and Foreign Review, we cannot bear him out in now persisting in the gross accusation which he has brought against a gentleman of Dr. Carpenter's personal and professional reputation. As an act of simple justice, we must express the opinion,—certainly an impartial one,—that the charge falls to the ground.

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### DOMESTIC.

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*Milky Cyst in the Mamma.*—We extract from the notes of a Clinical Lecture of Professor Parker, in the theatre of the College of Physicians and Surgeons of New York, reported in the N. Y. Medical Gazette, January 19, 1842, the following remarkable case:

"This patient is about thirty, apparently in good health, has always

worked hard, now has an infant nine months old, which she has nursed regularly from both breasts; the right is enlarged immensely. The patient states that the breast began to increase in size in July last, that it has gone on steadily augmenting, but without pain or febrile symptoms. The tumour is not now painful, but causes considerable inconvenience by its size. The nipple is natural, so is the skin; the blood-vessels of the breast are somewhat enlarged. On looking at this case our first idea would be, that we had hypertrophy of the breast, or else a tumour situated behind the gland pushing it forward; but on examining carefully we find distinct fluctuation; the swelling is therefore not solid but fluid. What then is the probable nature of that fluid? We have no reason to think that it is pus; having no evidence that the inflammation essential to the formation of pus has at any time existed. The tumour may be from hydatids, or from a collection of milk distending an obstructed lactiferous tube, though its very large size renders the latter supposition improbable.

As the case is obscure, I shall first perform an explorative operation, and push in a sharp pointed bistoury. '(This was done, and milk escaped. The true character of the tumour being now evident, a trochar was pushed in and milk gushed forth in a free stream; it was collected in basins; it was perfectly sweet and apparently quite unchanged; being measured after lecture, was found to be three full quarts. This milk, as we were afterwards informed, being allowed to stand 24 hours, gave a good quantity of cream.)' The nature of this case is now evident enough; it is a very remarkable one; I have never seen a tumour of this character approach the size of the one we have here; they are generally not larger than an orange. Every now and then lacteal fistulæ result from the opening of these sacs; in that case milk will flow from the artificial opening every time the child nurses, and the only remedy is to wean him; the breast then ceasing to secrete milk, the opening will heal. I shall direct this woman to call on us next Monday, that we may see the progress of this exceedingly curious case.

*Monday, Jan. 10.*

The patient with lacteal tumour again appeared in the theatre. The opening made by the trochar had healed by the first intention, and the milk had again accumulated in the breast. The organ was pendulous and somewhat pediculated; its circumference was 22 inches; fluctuation, more distinct at some points than at others, was evident all over the tumour. The trochar was again plunged in, and about two quarts of pure sweet milk drawn off. The patient was advised to wean her child."

*Compound fracture of the arm, complicated with laceration of the brachial artery.*—In the same number of the same Journal, we find a case of this severe complication, reported by Dr. Alfred C. Post. The termination was happy under such untoward circum-



stances, notwithstanding the unavoidable limitation of the motions of the elbow-joint :

“W. L., aged 52, was stepping from his stoop to a pump, which stood near his house, on the 16th February, 1835, the ground being at the time covered with a very smooth coating of ice, when he slipped and fell, his right elbow coming in contact with the pavement. I was passing by when he fell, and I assisted him to rise. I perceived at once that his arm was broken, and the arterial blood was flowing from it. My first impression was that he had been wounded by a fragment of a pitcher which he had in his hand when he fell ; but on exposing his arm, I found that there was a small laceration of the integuments at the seat of the fracture, which was just above the condyles of the os brachii, and that arterial blood was flowing very freely from the wound. I immediately compressed the artery against the bone, above the seat of the injury, and sent a messenger in quest of Dr. Buck, who soon came to my assistance. I then requested Dr. Buck to make pressure upon the artery, while I made a free incision in the situation of the injury, including the original wound made by the fragment of the broken bone. I had some difficulty in finding the artery, in consequence of the blood which was ejected into the cellular tissue. When the vessel was exposed I perceived an extensive laceration of its coats, and I applied two ligatures, one above and the other below the laceration. The edges of the wound were brought together in the usual manner. The wound was dressed on the fifth day after the operation ; there was not much union by first intention. A few days after the operation the patient became very much prostrated, with a feeble pulse, diarrhœa and vesications on the hand and fore-arm. By the use of astringents, tonics, and stimulants, these symptoms were arrested, and the threatening gangrene of the limb was prevented. The wound healed, and the bone was consolidated in about two months from the time of the injury. In consequence of the feeble vitality of the limb, the pressure of splints and bandages could not be borne, and the limb could only be supported on a trough or hollow splint, without bringing the fragments of the bone into a proper state of apposition. A considerable amount of shortening took place, and from the proximity of the fracture of the elbow-joint, the motions of that articulation were very much restrained.

The patient is still living and in good health, nearly seven years after the injury, but he has very little motion at the elbow of the affected limb.”

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### FOREIGN.

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*Anchylosis of the Lower Maxilla with the Temporal Bones.*—Dr. PAYAN, Surgeon to the Hôtel Dieu at Aix, in a collection of facts on different diseases of the head, which he has just published, reports

this remarkable case. It seems that the patient, 77 years of age, was attacked by the cholera morbus in 1835, and carried to the hospital, where he died in two days. It was observed upon his admission that he could not move the lower jaw, and that the tongue was protruded through an aperture formed by the loss of the four upper incisor teeth. His children and relations stated, that during his lifetime he had frequently told them that he had been unable to move his jaw from between four and five years of age, which he attributed to an accident he met with at that time, viz. the fall of a table upon his head, probably causing fracture of the maxilla near the condyles. Upon dissection, complete ossification was found to have taken place with both temporal bones, and the union was so perfect that no line of demarcation could be seen between them. All the teeth existed, with the exception of one or two molar, and the four upper incisors which had been extracted to admit the introduction of food. They were in close apposition with each other. The inferior incisors were pushed more forwards, and the molars more outwards, than in the natural state. In each parotid duct was found a calculus. No trace of fracture could be discovered in any part of the bone. There was no ankylosis of any other joint. This curious specimen has been frequently exhibited by M. Dubreuil to the medical students at Montpellier.

Cases of ankylosis of this articulation have been recorded before, but they have generally been found only when other joints had undergone the process. An officer died at Metz in 1803, who had long been affected with general rheumatism, brought on by fatigue during the war, in a cold and moist country. Upon dissection, every articulation was found ankylosed, and his skeleton, which is now in the museum of l'Ecole de Médecine, forms in reality a single bone.—*Lond. and Edin. Monthly Journ. of Med Sci.*, from *Gaz. Med. de Paris*, Aug. 28, 1841.

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*Case of Perforation of the Stomach.* By JOHN MOYLE, Esq.—On Wednesday, the 20th, ult., at 4 P. M., I was requested to visit Mary M., aged seventeen years. About an hour previous to my seeing her, she had been seized with severe pains in the stomach and abdomen, (shooting to the right shoulder,) aggravated in paroxysms and on pressure; the pulse was extremely quick, small, and depressed; extremities warm; the countenance expressive of hopeless anxiety; and the stomach occasionally rejected its contents. Bleeding, (to  $\text{ʒiij}$ . only,) instead of being followed by the satisfactory rise of the pulse which we look for in ordinary cases of membranous inflammation, caused only greater rapidity and further exhaustion. Her bowels had not been opened since the 25th. Warm fomentations, mustard poultices, purgatives, creosote, and turpentine injections gave little or no relief.

30th, 8 A. M.—She had passed a very bad night as to pain; she had voided only a very small quantity of high-coloured urine; tongue clean; skin pale; no medicine remains on her stomach; bowels have



not been relieved by the injections. She had been subject to pains in the stomach for four or five years, and had never menstruated; could lie on her back only: there was no hernia in any of the usual situations.

5½ P. M.—Pain still very severe; distressing vomiting and urgent thirst; bowels not yet open; extremities cold. From the moment of the seizure to its fatal termination no remedy gave relief, and in twenty-six hours the poor girl was released from intense suffering.

*Post-mortem examination, eighteen hours after death.*—The body, which inclined to *embonpoint*, presented no mark of disease externally, excepting a tympanitic state of the abdomen, which had commenced slightly before death.

The abdominal cavity contained a considerable quantity of air, and about three pints of dirty yellowish fluid. The intestines were slightly streaked with red, and their walls were slightly adherent together by soft recently effused lymph. This peritonitis was found to have been caused by the effusion of the contents of the stomach through an ulcerated aperture in its walls. The ulcer was circular, about three-eighths of an inch in diameter, with hardened edges. It was situated about two inches and a half to the right of the œsophageal opening on its anterior wall; the cellular tissue, for about three inches in length, and one and a quarter in breadth, was thickened, brawny, and puckered like a cicatrix. The internal surface of the stomach presented a funnel-shaped ulcer through its coats, the size of a shilling, without any surrounding inflammatory blush: there was a second ulcer about two inches below the first, of greater size, but of the same character, effusion being prevented only by its peritoneal covering. The liver was small, very white, and bloodless when cut into; and its texture easily broken down with the finger; the gall-bladder contained about an ounce and a half of thin and very light-coloured bile. In every other respect the abdominal viscera (I was not allowed to open the chest) presented the appearance of perfect and very robust health.

The only novelty which this case possesses is the absence of pain "*between the shoulders*," which has been considered, by Dr. Abercrombie and others, as practically diagnostic.

It is also confirmatory (if further proof were wanting) of the extent to which disease of the cardiac extremity of the stomach may proceed, without apparent loss of health.—*London Medical Gazette*, October 15, 1841.

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*Researches into the real constitution of the Atmosphere.* By MM. DUMAS and BOUSSAINGAULT.—It is generally admitted that the air is composed of a mixture of oxygen and nitrogen, and its invariableness is explained by supposing that the green parts of plants under the influence of solar light decompose all the carbonic acid developed

in the respiration of animals, and the putrefaction of organized bodies. Some, however, regard the air as being not a mixture, but a chemical compound of 20 of oxygen and 80 of nitrogen, (Prout, Dobereiner, Thomson, &c.) Others, and these the majority, consider it as a mixture of 21 of oxygen and 29 of nitrogen; and, lastly, in the opinion of some, (Dalton, Babinet,) the composition of the air varies according to the height in the atmosphere.

The plan employed by the authors in submitting these questions to a fresh examination is distinguished from others in that they estimate the weight instead of the measure of the gases, and thus analyze the air by weighing successively the oxygen and the nitrogen which it contains. We cannot follow them into all the details of their experiments, which, by successive corrections, were rendered more and more exact: we can only point out the results.

They fix the density of oxygen at 1.1057, and that of nitrogen at 0.972; numbers a little different from those given by other chemists. They demonstrate that the relation of the volume of the oxygen to that of the nitrogen in the air is not expressed by simple numbers; and that the air cannot be regarded as a chemical composed of 20 volumes of oxygen and 80 of nitrogen. They admit, as a *sufficient approximation*, that the atmosphere is composed, by volume, of 20.8 of oxygen, and 79.2 of nitrogen. They presume that the mixture is uniform in all times, in every latitude, and at every height. "If the atmospheric air," they add, "is a reservoir of oxygen for the use of animals, and a reservoir of carbonic acid for the use of plants, it is so considerable a store that the consumption, supposing it not to be compensated, would remain almost insensible after a long series of years." They have calculated that supposing each man to consume a kilogramme of oxygen per day, and that the oxygen disengaged by plants did no more than compensate for the other causes of its absorption, the whole human race, and three times their number, would not consume, in a century, the eight-thousandth part of the oxygen which nature has placed in the respirable air—*Lond. Med. Gaz.*, Oct. 15, 1841, from *L'Examineur Medical*, Aout 20, 1841.

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*On the Influence of the last Inundation on the health of the Population of Lyons.*—It was a matter of much interest to determine what were the effects on the health of its inhabitants of the inundation, which, in so short a time, on two different occasions, covered a part of the town of Lyons. If mere variations of temperature and atmospheric moisture do exercise on the health only a part of the fatal effects attributed to them, it is certainly, in a case like that of Lyons, that such effects ought to be easily appreciable. In no inundation of that town had the waters ever before risen to such a height: in none was their stay so long, or their retreat so slow. They covered the town and the country round over an area of several leagues: they inundated the quays, the streets, the places of public resort the cellars, the houses; and they polluted the waters of the



wells, the pumps, and springs, with heterogeneous substances that filtered into them from the sewers and the privies. After their retreat, a stinking sediment covered the majority of the streets, and a thick viscid mould lined the inner walls of the houses: the atmosphere was charged with a nauseous dampness: the population was distressed: every thing was dreary; and yet the inundation of 1840 had but a just perceptible influence upon the public health. From the month of November, in that year to the present time (July, 1841,) the hospitals have not been more than usually encumbered: the numbers of patients has been but little increased; and, though the mortality has been distinctly greater, yet this cannot be attributed to any disease in particular produced by the inundation.

In the days immediately following this scourge, a considerable number of cases of obstinate diarrhœa, and some of dysentery attributed to drinking the unwholesome water, were observed. Some typhoid fevers also appeared; and, if the state of the atmosphere had any influence upon them, it was only by prolonging their continuance, and giving them a more marked adynamic character. Still they were not more fatal than they usually are, though it was necessary to modify the ordinary treatment; blood-lettings at the outset were less employed, and tonics were sooner and longer administered.

At a later period numerous and obstinate rheumatisms were observed, but they rarely had an acute character, except in those who had worked long in the water: in general the moisture of the atmosphere rather revived old pains than generated new ones. The diseases which reigned most generally, were catarrhs and catarrhal fevers, which, however, are habitually prevalent at Lyons at this season; but the inundation remarkably increased their number and modified their character; some affecting the lungs, had an alarming intensity and obstinacy, but on the whole they destroyed but few. An epidemic disease, of which both the etymology and etiology are still obscure, reigned at this time at the garrison, but it could not be, in any measure, traced to the effects of the inundation.

Notwithstanding the absence of any special affection, however, the mortality was more considerable than during the preceding years. Thus, in the last two months of 1840, the town and hospitals together had 1118 deaths; while in the same two months of 1839, there were but 787, and of 1838 only 750. But this difference is easily explained by the pernicious influence such a scourge would have on aged, weak, and diseased people, and especially on such as were already affected with chronic diseases.

The author attributes the good state of health of the town and its environs, during the continuance of the scourge, to the prompt and energetic measures, which were taken by the local administration, and to the north wind, which continued for twenty days, and greatly aided the sanitary measures that were being employed.—*Lond. Med. Gaz. November 5, 1841, from Journal de Medecine de Lyons, Juillet, 1841.*

*M. Raciborski on the Physiology of Menstruation.*—Our readers will remember that in our recent review of Gendrin's *Traite Philosophique*, we drew their attention to this curious, and hitherto ill-understood subject of physiological inquiry. From the researches of this gentleman, and from those of M. Negrier, as well as of Dr. Robert Lee, it was suggested that there is an actual rupture of one of the ovarian vesicles at each period of menstruation, and that the sanguineous discharge from the uterus was the result of this lesion. M. Raciborski questions the accuracy of this statement. While he admits that the primary movement in each act of menstruation is a congestion of the vessels of the ovaries, he denies that any rupture of their surface necessarily takes place at the same time.

M. Raciborski sums up the conclusions to which he has come, after a very elaborate inquiry, in the following propositions:—

1. That menstruation is a consequence of the accomplishment of the development of the ovaries.

2. That it is the direct result of the means employed by nature to place the ends of the Fallopian tubes and the ovaries in the relations necessary to fecundation and the passage of the fecundated ova.

3. That the sanguineous congestion, which is indispensable for obtaining those conditions in the human being, appears sufficient in itself to explain the occurrence of the hæmorrhage which constitutes menstruation—without having recourse to supposing that there is any necessary solution of continuity.

4. That the vertical position, favouring still more the effects of sanguineous congestion on the generative organs, may be one of the principal reasons of the abundance of the menstrual flux in women, and in some species of simiæ.

5. That, for want of having precise information as to the nature and theory of menstruation, it has been hitherto impossible to establish a rational treatment of the various disorders induced by irregularities of this function.

6. That it is not yet sufficiently proved that the ovula arrive successively to maturity at each menstrual epoch, or that the most mature ovum then approaches nearest the surface of the ovarium, there to become ruptured and give exit to a germ.—*Med. Chir. Rev.* Oct. 1841, from *L'Experience*.

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